Learning Materials, Tools, Markets, and Standards

Many college professors are venturing into cyberspace these days—learning HTML, experimenting with Web design, and pointing their students to brand-new Web sites for assignments, due dates, course syllabi, and, increasingly, links to other sources. Anyone with a basic understanding of HTML can create a link to somewhere else in cyberspace, but what are the implications of actually pointing and clicking in an increasingly point-and-click academic world?

The practicality of diving for treasure in this seemingly bottomless well of digital images and documents was a key subject at this year’s NLII meeting in San Diego, organized around the themes of learning objects and digital repositories. The wider institutional implications of that bounty also stirred considerable attention. The digital repository infrastructure is already up and in use at some colleges and universities, creating a laboratory for new systems and techniques. Students can use school-generated portals to build on their own academic interests; they can also sign on to online libraries and repositories, such as MERLOT, Questia, ebrary, and NSDL. Students and faculty can now search preconstructed databases for articles, quotes, bios, and primary texts. A keyword search in MERLOT (Multimedia Education Resource for Learning and Online Teaching) for Plato can—within a few mouse clicks—lead users to the Internet Classics Archive, where Plato’s Apology can be viewed online. Professors also share the wealth: An American history teacher might use the same resource to point students to a Web site on the Battle of Lexington and Concord or locate an appropriate assignment for a lecture on Confederate slave soldiers during the Civil War. And in the wake of this reality, administrators discuss funding, management, and long-term planning for digital repositories, while technologists scramble to actually provide the infrastructure that will support them.

The creators of these online libraries and databases were well represented in San Diego, where Edward Cooper, former CEO of MERLOT, joined Assistant Provost M. S. Vijay Kumar of Massachusetts Institute of Technology and chief executive Edward C. T. Walker (of IMS Global Learning Consortium) to discuss the future of technology designed to help students and faculty find and use Learning Objects on the Internet. In one of the sessions, Cooper and Walker shared stories and technical insights about the feasibility of their own initiatives and in a later session, on the promises and pitfalls of Learning Objects. Ohio State University deputy CIO and professor Susan Metros furthered the conversation, painting a vivid portrait of the point-and-click conundrum—endless possibilities with very little structure or consistency. Professors with the requisite technical savvy—or help from their schools—can use existing technology to point students toward a dizzying array of sources and information, but those instructors then must don additional hats; they become researchers and resource managers by evaluating sources and helping students navigate the information. Metros and her partners in the session—University of Tennessee Web instructional technologist Kathleen Bennett and University of Arizona research associate Veronica Diaz—all argued for applying academic standards to this new technology: use-reusable, peer-evaluated, media independent learning objects that are tagged and referenced to clearly identify the source. They also agree that educators will be challenged to learn the technology and become more creative in the classroom.

Digital repositories help faculty members and students alike become managers. They enable students to retrofit a course to their own learning styles and interests. SMETE for example, allows users to log on for free, search databases, and create a profile based on academic interests and background that then provides links to learning objects that might be user specific. SMETE also refers users to other members who have similar interests.

Learning Objects are an NLII theme because their use has the potential to, as Metros said, “offer great value in terms of saving time and money in course development, increasing the reusability of content, enhancing students’ learning environments, sharing knowledge within and across disciplines, and engaging faculty in a dynamic community of practice.” The NLII is supporting the development of a Learning Objects working group chaired by Metros. For more information, see the NLII Key Themes page on the NLII Web site, or contact Metros at metros.1@osu.edu.